

US 09/806873

Practitioner's Docket No. P1998J096

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :

Alan Blahey, et al.

U.S. Serial No.: 09/806,873

Filed: October 13, 1998

Long Life Gas Engine Oil and Additive
System

Before The Examiner:

C Toomer

Group Art Unit 1714

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

DECLARATION (37 C.F.R. § 1.132)

I, Jim Cartwright, declare that:

1. I am an employee of Imperial Oil, an affiliate of ExxonMobil which is assignee of this invention. I have been an employee for 26 years. I have worked in Imperial Oil's Sarnia Research Center since 1977. I received my Doctorate degree in Chemistry from University of Leicester in Leicester, UK.
2. I have been informed of the Interview with the Examiner on September 9, 2003 in which she asked us to provide further data to support the claimed range for the Viscosity Index Improver.
3. I have read and am familiar with the Application.
4. I understand the invention to relate to a long life gas engine oil comprising a major amount of an oil of lubricating viscosity and a minor amount of additives comprising phenolic anti oxidants, a low ash gas engine oil detergent system having a TBN of about 50 to about 300, from about 0.05 to about 1.5 vol% of antiwear additives and viscosity index improver which does not contain aminic anti oxidant, wherein the oil of lubricating viscosity has a viscosity of between 9 to 13 cSt at 100°C, said oil of lubricating viscosity being a synthetic, hydrocracked or solvent refined oil or mixtures thereof, and which oil of lubricating viscosity does not contain a base stock having a viscosity of 20 cSt or higher at 100°C, wherein the phenolic anti oxidant is present in an amount in the range of about 0.1 to 2 vol% and the viscosity index improver is present in an amount sufficient to increase the viscosity of the engine oil to about 13.2 cSt at

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100°C and wherein said amount is in the range of about 0.1 to 3 vol% and wherein the gas engine oil has a low ash content in the range of 0.1 to 0.6 wt%.

5. I submit the data (as Table I) that demonstrates the claimed range of the invention.
6. As the person making this declaration, I hereby declare that all the statements made herein are to my own knowledge, are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Dated: January 20, 2004



Jim Cartwright
Imperial Oil Ltd.
453 Christina St. South
Sarnia, Ontario

Table 1

	COMPONENT (VOL %)	REF OIL 1	14	15
<u>Additive system</u>				
	Commercial package B	9.60	9.60	9.60
	Pour point depressant	0.50	0.50	0.50
<u>Baseoils</u>				
	Hydrocracked 500N base	77.55	86.90	85.90
	Solvent refined 1200N base	11.35	---	---
<u>Supplementary antioxidants/Viscosity index improvers</u>				
	Amine 1	1.00	---	---
	Phenol 2	---	1.00	1.00
	Monofunctional OCP VII	---	2.00	3.00
<u>Results (candidate : reference ratio)</u>				
	Viscosity increase	1.00	0.10	0.50
	Oxidation	1.00	0.69	0.73
	Nitration	1.00	0.70	0.69

J. Catwright
Jan. 20, 2004